COUNTY OF LANARK.

FIRST
ANNUAL REPORT
ON THE
MEDICAL INSPECTION
OF
SCHOOL CHILDREN.

1909-1910.

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TO THE SCOTCH EDUCATION DEPARTMENT, TO THE COMMITTEE OF THE COUNTY OF LANARK ON SECONDARY EDUCATION, AND TO THE SCHOOL BOARDS CONNECTED THEREWITH.

My Lords and Gentlemen,

In accordance with the regulations contained in the Memorandum of the Scotch Education Department on the Medical Examination and Supervision of School Children, dated 31st March, 1909, the following Report has been prepared, with the assistance of the two Senior Medical Inspectors. The Report deals with the inauguration of the scheme and the work done up to 31st July, 1910. A supply of copies of the Report has been made available for distribution among the members of School Boards.

I am,

My Lords and Gentlemen,

Your obedient Servant,

JOHN T. WILSON.

County Offices,
Hamilton, 24*th November*, 1910.

SCHOOL MEDICAL STAFF.

SENIOR INSPECTORS.

Wm. Jones Mackinnon, M.D., D.P.H.

John Macintyre, M.B., Ch.B., D.P.H.

JUNIOR INSPECTORS.

Cunison D. Rankin, M.B., Ch.B., D.P.H.

Donald Clark, M.B., Ch.B.

NURSES.

Katherine Boyd.

Mary C. Cram.

COLLEGE OF

PART I.—SCHOOL MEDICAL SERVICE.

SCHEME OF MEDICAL INSPECTION.

Inauguration.—The Education (Scotland) Act, 1908, which provides for the medical examination and supervision of school children, came into operation on 1st January, 1909. The circular 421 and relative memorandum with regulations, issued by the Scotch Education Department, is dated 31st March, 1909. The scheme prepared by the Committee on Secondary Education of the County of Lanark, and approved by the Department, was submitted to the constituent School Boards in a letter, dated 9th June, 1909, with relative memoranda. This scheme was adopted by all the constituent School Boards except Springburn in the City of Glasgow, and two rural School Boards—Crawfordjohn and Leadhills*—with three schools in the Upper Ward of the County.

Area.—With much satisfaction can it be recorded that the Lanarkshire area of administration remains almost intact for this important work. The area comprises 43 School Boards, having 238 schools, with 103,760 enrolled scholars.

The schools are situated in 11 sanitary districts, and in the Maryhill portion of the City of Glasgow. The 11 sanitary districts have a total area of 548,072 acres, and the estimated population is 505,358, made up as shown in the tabular statement at page 41.

Staff.—The scheme provided for the appointment of four or five duly qualified medical practitioners, who would devote their whole time to the work. The appointment of nurses was also mentioned, but the number could not be indicated until experience had shown what assistance would be given by the teaching staff of the School Boards. In proceeding to make appointments, the Committee had in view the desirability of uniformity in the method and standard of examination, and in recording the results obtained. A careful study of *the Schedule of Medical Inspection and the notes for inspecting officer* at once showed how important the personal factor becomes in making an examination. Conditions, such as clothing and foot gear, nutrition and cleanliness, tonsils and adenoids, could be expressed in different terms by different medical inspectors unless they collaborate in fixing a standard.

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* Since this report was prepared intimation has been received that Leadhills School Board have resolved to join in the Committee's scheme of medical inspection.

The Committee therefore began by appointing two senior inspectors, who entered upon their duty on 21st September, 1909. On 4th October the first school was visited, and for some days the inspectors worked together, in order to obtain uniform and comparable results. Thereafter they worked separately in different areas.

By the end of October sufficient experience had been gained to submit a preliminary report detailing the procedure adopted, the results obtained, and the remedial measures suggested. This report was submitted to the Committee on 10th November. After much deliberation it was agreed to appoint two junior medical inspectors and two trained nurses. The two junior inspectors entered upon duty on 5th February, 1910, and worked under the direction of the senior inspectors. The two trained nurses entered upon duty on 1st March, and assisted the medical inspectors by preparing the children for examination. The staff was thus equally divided into two groups, each comprising a senior, a junior medical inspector, and a nurse. The personnel is given on page 6, and in forming an estimate of the work accomplished during the session the dates of appointment should be remembered.

Allocation of the staff to two definite areas was discussed, but not determined. The existing divisions of the County—Upper, Middle, and Lower—were recognised to this extent, that the Upper Ward was taken by Doctor Mackinnon, with the assistance of Doctor Rankin and Nurse Boyd; the Lower Ward by Doctor Macintyre, with the assistance of Doctor Clark and Nurse Cram; while the work in the Middle Ward has been shared between the two groups as seemed most convenient.

Office accommodation has been provided in the County Buildings, Hamilton, where two rooms, on the same floor as the Public Health Laboratory, have been set aside, one for the medical inspectors and the other for the clerical staff, which at present consists of a senior and junior clerk.

EQUIPMENT.

Weighing machines, measuring rods, vision test cards, fountain pens, stationery, school boxes for record cards, coats for the medical inspectors, and uniform for nurses were the chief items provided.

Weighing Machines, Measuring Rods, &c.—To obtain a record of the height and weight of each scholar on four occasions during the school curriculum involves, especially in large schools, such an amount of work that it might have seemed desirable to purchase a weighing machine and measuring rod for each school. Had that been considered necessary, there would have been no difficulty in selecting an apparatus, as portability would have been of little importance. Various makers have put upon the market special machines for weighing children, constructed on the lever principle.

These machines can be purchased at prices varying from 40s. to 57s. 6d. The number of schools within the inspection area is 238, so that to purchase a machine for each school would have cost more than £500. Owing to the capital outlay involved, only three weighing machines of this type were purchased, and consideration given to a portable apparatus that could be readily carried by a nurse or a boy.

Enquiries were then made as to spring-balances, and great difficulty was experienced in obtaining a suitable apparatus, even from the largest makers. The first spring-balance purchased was said to have been specially made for school work, and strongly recommended by the makers. This machine was carefully tried, and found altogether too heavy for transmission from school to school. Recently a lighter spring-balance has been obtained, which seems satisfactory. It has a dial of 8 inches, and weighs up to 150 pounds by half-pounds, and can be readily suspended from a hook screwed into the lintel of a door. The whole subject is still under consideration.

Measuring rods, to be fixed to the wall, can be purchased at 1s. each; but many are also made of a portable nature. Various forms are in use. A measuring tape fixed to the wall has also been tried, and with care was found to serve the purpose.

Vision test cards can be purchased at 6d. each, and are being obtained in such quantities as will allow of one being kept at each school.

STATIONERY.—Record cards require to have a certain amount of rigidity, with a smooth surface. Cardboard and Manilla paper have both been used; the former was found the more suitable, and after competitive offers had been obtained an order was placed with a Leeds firm. The notice cards to parents and other cards do not call for comment.

A box for each school to hold record cards was submitted, in various forms of wood and tin, and wood was selected. The order was placed with a local firm, whose price was cheapest. The box is made of "Gaboon mahogany," unvarnished, fitted with a good lock, and duplicate keys are supplied.

ADMINISTRATIVE PROCEDURE.

In arranging for the introduction of medical inspection, three administrative authorities were recognised—the Scotch Education Department, as the central authority, originating and regulating the inspection; the School Boards, as the Executive Authority primarily responsible for carrying out the work; and the County Committee on Secondary Education, as the organising and administrative authority, affording facilities for attaining the objects in view.

The memorandum and regulations of the Department were carefully studied, and the principles laid down have been fully appreciated. All advice given, such as caution, consideration for the teaching staff, the exercise of sympathy and tact, and due regard for public opinion, has been steadily kept in mind. The attitude adopted was that of helpfulness, seeking to be of service alike to the parents, teaching staff, School Board, and health authority.

Who are to be Examined.—The memorandum suggests that for the first year or two, "If each School Board aims at the thorough inspection of all children newly admitted, and of those about to leave school, the experience so gained will enable the medical officers to proportion their time to the needs of the particular school, to overtake the cases submitted by teachers or parents, and to establish a regular system of class visiting for selected cases of illness or defect. In the course of time all the children affected with chronic or acute ailment or defect will be known and easily supervised, and systematic examination of the remainder thus facilitated."

Children newly admitted, or *entrants*, are to be found mostly in the infant class; children about to leave school, or *exeunts*, are in the senior or supplementary classes. The submitted or selected children may be found in any class, and may even include children who have not been to school for a considerable time. Indeed, lists have been received from one or two School Boards submitting names of defective children who are said not to be attending any school, and advice asked as to what the School Board should do. It had to be pointed out that the examination is to be conducted during school hours, and on school premises, but information is being sought through attendance officers that may prove helpful in giving advice. From the administrative point of view, the children to be examined may be divided into two groups—the routine cases and selected cases. In the records of work here submitted it will be found that all the scholars examined are further classified into boys and girls, so that we get as routine cases infant boys and girls, senior boys and girls, then selected boys and girls. These three groups and both sexes are presently recognised for statistical purposes, and in time further groups will be formed.

The medical examination and supervision provided by Statute is for pupils attending schools, and the memorandum points out that this includes higher grade schools, secondary schools, and continuation classes. "In short, it may be stated generally that, so long as the school authorities are responsible for the education of the pupil, they should also take the necessary steps to ascertain from time to time his fitness for school work." The question arose at the commencement of the current session as to whether students attending training centres should also be examined by the school medical staff, and the Committee decided to undertake this work.

School Visitation.—The arrangements for a visit have so far been carried out by communicating directly with the headmaster of the school, and to that arrangement only one School Board raised any objection. Our first object was to obtain such information as to the number of scholars on roll as would allow of selection being made for examination on the lines above suggested. In making this selection and arranging the work, the staff kept in view the desirability of overtaking, if possible, all schools before the first week in July, when most of the schools close for the annual holidays. Having thus ascertained approximately through the headmaster the number of pupils to be examined as routine cases, the second step in the procedure was to send a record card and a health-history card for each of these scholars, also a tabular form for recording names of all scholars to be presented for special examination. The health-history cards were issued by the teachers to each of the scholars asking the parents to indicate what illnesses affecting health the scholar had suffered, also asking whether the parents wished to be present at the examination, so that they may be duly notified of the date of examination by the teacher.

The headmaster, having obtained the information asked from the parents, prepared the record cards for the medical examination by entering the name, age, and address, as well as the health history of each scholar to be examined among the routine cases. On the form for specially selected cases the teacher was asked to indicate the conditions for which the special examination was suggested. All this no doubt imposed a considerable amount of extra work upon the teaching staff, but it was really the minimum amount necessary. In communicating with the headmaster, it was mentioned that if he could arrange with his staff for taking the heights and weights of those children to be examined it would be a favour; and in almost every instance the work was so undertaken, but during the current session this work is to some extent being carried out by the school nurse.

In fixing a date for a visit the length of notice varied considerably, but on an average would be about a week. When the date fixed for the examination was found by the headmaster not to be suitable, it was altered. Some days' notice seems absolutely necessary, in order that parents may have an opportunity of being present; but it also allows parents to present their children with a certain amount of extra preparation.

Parents have not shown a great desire to be present at the medical examination; and, having regard to the simple nature of the examination, this is not at all surprising. In country districts, where the school is some distance off, and mothers are busy with household duties, it seems unreasonable to expect them to attend, unless there is something special in the child's condition requiring explanation.

The accommodation for carrying on the work of the medical examination has varied considerably at different schools. In some instances where the class-room accommodation was severely taxed the work was carried on in the room where the pupils were being taught, a space being screened off while the examination proceeded. Under these circumstances a medical examination becomes an irksome task. The headmaster at some schools gave the use of his own room. At only a few schools was a special room available.

THE EXAMINATION.—In large schools and in most small schools the three members of the staff made a visit together. The names of all the children having been written up either on the record card or on the list of selected, the work of examination was at once begun. The nurse prepared the children by loosening buttons and undoing the dress, and both doctors were in this way kept steadily occupied.

The nature and extent of the personal examination made by the inspectors is indicated in the schedule, which is "intended to serve at once as a guide in the conduct of the examination and as a record of results." As each scholar is examined, the inspector makes the entries on the record card. Sometimes there is nothing abnormal to record, then the entries are simply a series of ticks. When the conditions are abnormal they are generally indicated by signs. Defects, when slight, are indicated by a X; when more marked, by XX; and when very bad, requiring the immediate attention of the parent, by XXX. It will be remembered that the examination of infant scholars is not so complete as that for junior and senior scholars. The notes to the schedule show that vision, hearing, and mental capacity of infants are to be passed over lightly. The examination of a child that has newly entered school is made as simple as possible.

All cases found at school suffering from infectious or contagious conditions considered dangerous to other pupils were at once excluded, with a note to the parents, and reported to the Medical Officer of Health. All children found in a filthy or verminous state, or whose appearance otherwise suggested that the home conditions were not satisfactory, were also reported to the Medical Officer of Health.

ISSUING NOTICES AND RESULTS.—After the medical examination of a school has taken place, the record cards—one for each child examined—are handed into the office by the medical inspectors, or transmitted by post. These cards are gone over, classified, and those specially marked as indicating that the child requires attention are separated out. Intimations to parents calling attention to the child's defects are then prepared; but as special cards for intimations are in print for nits, tonsils, vision, and ear discharge, only the name of school and name and address of the pupil require to be written on the card. So soon as these are signed by the medical inspector, the cards are despatched forthwith by post in a sealed envelope with necessary postage. Should any cards be returned "Not found," they are forwarded to the headmaster for distribution in sealed envelopes.

A typewritten list of the scholars found with conditions requiring attention, and of which the parents have been advised, is made up, and forwarded to the headmaster as private information, a copy of said list being retained in the office. A summary sheet is prepared for each school examined, showing the number of children examined, the number of defects recorded, and the number of defects requiring immediate attention. To ascertain this entails going over every record card and noting down the defects indicated thereon. A copy of each summary is transmitted to the Clerk of the Secondary Education Committee, who forwards it to the Clerk of the School Board concerned, for the Board's information.

Should any pupil be discovered who can be classed among *defective* children, or *neglected* children, requiring attention by the School Board, each case is at once reported through the Clerk of the Education Committee to the Clerk of the School Board for the Board's attention.

The box holding the record cards for each school was despatched by messenger or rail. In future the cards will be sent by post, and placed in the box by the headmaster. At the commencement it was thought it might be desirable to have in the office a copy of the record of each pupil examined. After some experience and further consideration this was departed from, as the pupil's record card is kept under lock and key at the school, and should be always available. As only those children presenting defects requiring remedial measures are of immediate interest after the examination is over, it seemed that the summary of results of all children examined and the detailed list of those requiring attention was all that required to be kept in the office.

Revisits.—For the purpose of ascertaining what remedial measures had been carried out, or what improvements effected in the conditions notified to parents, thirty-five schools were revisited by the medical inspectors, and 1,924 pupils re-examined.

RESULTS AND REMEDIAL MEASURES.

The records of inspections kept in the office have, at the close of the session, been tabulated by the two senior inspectors with much detail, and are available for reference, but the results have been summarised for this report in two tables—Vidimus A and B. These tables show that up to 31st July, 1910, 23,585 children had been examined, being 22·7 per cent. of the total number of scholars on roll (*see* Vidimus A, columns 8 and 11). The frequency with which abnormal conditions have been recorded is given in column 9, which has a total of 28,137. It must not be thought, however, that because this number exceeds that given in column 8, every child presented some abnormal condition, as sometimes one child would have three or four different conditions recorded.

VIDIMUS A.—WORK DONE FROM 4TH OCTOBER, 1909, TO 31ST JULY, 1910.

SCHOOL BOARDS.	SCHOLARS EXAMINED IN EACH GROUP. Infants.		Seniors.		Selected.		Total.	CONDITIONS.		SCHOLARS.
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.		Recorded.	Notified.	on Roll.
Airdrie, ...	305	267	113	102	149	150	1,086	1,527	601	4,883
Avondale. ...	58	48	107	79	7	8	307	373	88	835
Biggar, ...	23	23	16	20	11	6	99	154	14	368
Blantyre, ..	219	214	86	82	36	22	659	944	159	2.986
Bothwell, ...	525	493	404	372	144	185	2,123	2,103	669	10,575
Cadder, ...	33	35	32	26	28	25	179	217	72	1,927
Calderhead, ...	111	104	69	83	29	27	423	487	125	1,770
Cambuslang. ...	189	216	187	176	130	157	1.055	1,213	433	4,491
Cambusnethan, ...	379	347	268	267	143	209	1,613	2,153	608	5,654
Carluke, ...	116	90	93	96	39	44	478	518	124	1,914
Carmichael, ...	13	10	9	9	—	—	41	28	4	40
Carmunnock. ...	20	13	5	4	3	5	50	50	13	120
Carnwath, ...	17	19	22	25	—	3	86	70	9	1.130
Carstairs, ...	55	59	57	55	1	2	229	264	42	376
Clarkston. ...	83	79	75	89	28	31	385	269	101	2,027
Covington & Thankerton,	2	2	3	4	—	—	11	15	3	46
Crawford, ...	20	18	36	42	—	—	116	101	13	123
Culter, ...	4	3	3	1	1	1	13	19	3	66
Dalserf, ...	66	64	29	35	5	4	203	338	36	1.106
Dalziel, ...	312	323	474	363	266	279	2,017	2,595	808	9.619

Dolphinton, ...	2	8	7	5	—	—	22	20	—	79
Douglas, ...	50	46	23	27	—	—	146	140	15	404
Douglas Water, ...	32	39	16	10	—	—	97	93	10	319
Dunsyre, ...	3	4	—	4	—	—	11	13	—	24
East Kilbride, ...	42	37	67	49	—	—	195	220	72	468
Glasford, ...	30	38	29	32	2	2	133	156	40	218
Hamilton, ...	569	579	452	427	156	164	2.347	3,098	790	8,932
Lanark, ...	90	81	135	112	62	58	538	665	189	2,022
Larkhall, ...	303	278	91	60	1	1	734	1,097	98	3,089
Lesmahagow, ...	208	187	201	174	34	16	820	856	146	2,592
Libberton, ...	1	2	16	16	—	—	35	30	5	48
Maryhill, ...	381	397	356	343	174	157	1,808	2,137	760	8,980
New Monkland, ...	37	28	19	21	42	42	189	202	61	1,931
Old Monkland, ...	613	541	424	366	224	165	2,333	2,622	999	11.540
Pettinain, ...	9	13	13	5	—	—	40	40	8	32
Rutherglen, ...	151	150	236	239	78	90	944	1,082	404	4,807
Shettleston, ...	333	293	192	202	90	82	1,192	1,292	437	5,119
Shotts, ...	94	106	125	125	34	33	517	519	129	2,215
Stonehouse. ...	63	56	50	42	12	16	239	324	73	659
Symington, ...	3	4	3	2	1	—	13	17	3	58
Walston, ...	6	5	6	4	6	—	27	41	6	72
Wandell & Lamington,	4	4	2	1	3	1	15	24	3	45
Wiston & Roberton,	7	5	2	3	—	—	17	11	1	51
TOTAL,	5,581	5,382	4,553	4,199	1,939	1,985	23,585	28,137	8,174	103,760
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

VIDIMUS B.—RESULTS OF EXAMINATION IN EACH OF THE THREE GROUPS OF SCHOLARS.

			Infants.		Seniors.		Selected.		Three Groups.			
			Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Total.	Percentage.
Number examined,			5,581	5,328	4,553	4,199	1,939	1,985	12,073	11,512	23,585	
Conditions noted—												
Clothing and Footgear,			407	216	247	75	211	90	865	381	1,246	5·2
Nutrition,			263	294	78	57	118	93	459	444	903	3·8
Cleanliness and Condition of Skin.	Head Pediculous,	Nits,	103	1,168	28	666	39	399	170	2,233	2,403	10·1
		Lice,	167	227	69	59	113	134	349	420	769	3·2
	Contagious Skin Diseases,	Impetigo,	56	47	10	5	26	17	92	69	161	0·6
		Ringworm,	19	8	3	—	16	4	38	12	50	0·2
		Scabies,	3	6	2	3	8	3	13	12	25	0·1
Teeth Decayed,		Temporary,	1,121	1,065	62	66	27	30	1,210	1,161	2,371	20·8
		Permanent,	1	3	1,024	1,063	250	204	1,275	1,270	2,545	
Nose and Throat,		Tonsils,	1,150	1,144	860	816	253	274	2,263	2,234	4,497	19·1
		Adenoids,	183	136	71	55	95	76	349	267	616	2·6
		Glands,	989	913	553	411	220	176	1,762	1,500	3,262	13·8

External Eye Disease, ...	232	242	113	120	140	160	485	522	1,007	4·2
Vision—distance test, ...	42	36	739	838	506	654	1,287	1,528	2,815	21·5*
Squint, ...	105	101	56	49	92	81	253	231	484	2·0
Ear Disease, ...	115	75	82	71	65	77	262	223	485	2·0
Wax, ...	302	280	348	300	103	86	753	666	1,419	6·0
Hearing, ...	31	24	133	130	95	129	259	283	542	2·2
Speech, ...	51	29	68	28	87	49	206	106	312	1·3
Mental Condition, Dull, ...	72	54	25	23	79	55	176	132	308	1·3
Deficient, ...	9	9	7	5	31	11	47	25	72	0·3
Heart and Circulation, ...	21	9	40	32	15	5	76	46	122	0·5
Lungs, ...	71	66	23	7	30	19	124	92	216	0·9
Nervous Disease, Epilepsy, ...	3	1	7	3	8	4	18	8	26	0·1
Chorea, ...	—	—	1	1	1	4	2	5	7	0·02
Paralysis, ...	4	6	5	4	3	9	12	19	31	0·1
Tuberculosis—Pulmonary, ...	4	1	2	—	4	4	10	5	15	0·06
Do. —Osseous, ...	16	15	7	7	16	14	39	36	75	0·3
Do. —Glandular, ...	36	45	26	18	29	25	91	88	179	0·7
Rickets, ...	85	83	25	9	30	31	140	123	263	1·1
Deformities, ...	69	75	36	23	54	33	159	131	290	1·2
Infectious Disease, ...	6	3	—	1	1	—	7	4	11	0·04
Other Diseases or Defects, ...	128	97	87	124	96	78	311	299	610	2·5
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

* Infant group not included.

Many of the conditions recorded were not considered so serious as to require remedial measures. This is shown by the figures given in column 10 of Vidimus A, which has a total of 8,174 as compared with 28,137 in column 9. That is to say, the conditions notified to parents as requiring immediate attention amounted to about 29 per cent. of the total conditions recorded. No attempt has been made to compare one School Board area with another, or one class of the community with another, such as agricultural with industrial, nor is that considered desirable at present; yet to any one specially interested, the total results in different School Board areas may be compared by utilising the figures in columns 8 and 9 of Vidimus A.

The nature of the defects or abnormal conditions recorded on the schedule of each pupil is summarised for the whole County in Vidimus B, only distinguishing the three groups of pupils examined. These defects are discussed in the text by the two senior inspectors; but it is perhaps desirable that some administrative aspects should be referred to here. At the outset it might be asked what is the practical outcome of all this visitation, medical examination, and supervision of pupils? Has any practical good been attained? The introduction of medical inspection as part of the routine work of the school has, I believe, been carried out without arousing any serious opposition, and that in a country where the independence, the freedom, or liberty of the subject is probably more respected than it is anywhere else. Parents, teachers, and School Boards on the one hand; local health authorities, with their staff, and the medical profession on the other hand, have all been concerned in the work accomplished.

Parents have shown an interest in various ways. They have supplied the information on the health-history cards, showing what illnesses bearing on health and school attendance their children may have suffered. Many have come with their children to meet the medical inspector, although in country districts this can hardly be looked for to any extent. Many have seen that their children were presented in the best possible condition; indeed, at some schools the inspectors referred to this as a drawback, because the children were not seen in their normal state. Parents have received notices of defects requiring attention, many of these referring to conditions which the parents are able to remedy without calling in professional aid. Clothing and foot gear, the state of nutrition, the presence of nits or lice, the existence of wax in the ears are all conditions they are able to remedy, and in most instances these have been attended to by the parents.

The teachers have received lists of children whose parents were notified of conditions requiring attention, and have taken an interest in such pupils.

School Boards, on receiving summary statements of the results, have made inquiries as to whether the defects are being remedied. One School Board at least have even gone so far as to form a medical committee for the purpose of following up defects. Other School

Boards have sent lists of defective children, including not only those attending school, but those absent owing to defects or illnesses.

Health authorities have allowed their staff (nurses and sanitary officers) to visit homes where conditions were notified that they might be helpful in obtaining remedial measures for children suffering from contagious skin diseases, such as ringworm and itch; dirty clothing; and body vermin. Hospital treatment has been provided by health authorities for cases which could not be properly treated at home.

Medical practitioners, especially those in practice in mining districts, have simply been flooded with notices sent to parents dealing with conditions requiring medical treatment, such as affections of the nose and throat, affections of the eye, &c. Many of these practitioners have done their best to remedy any serious defect to which their attention was called. In one or two instances perhaps the notices have been torn up and thrown into the waste-paper basket. The oculist also has been busy.

Although it is not possible to state how far every individual defect notified to the parents has been treated, yet information from many sources has come to hand showing that the work of the medical staff provided by School Boards throughout the County has not been labour in vain. Later on it will be possible to speak not merely in general terms, but, with greater detail, when time and experience will no doubt show beneficial results in many directions. The work has so far been quietly introduced, and has created widespread effects. In discussing results and remedial measures, special reference should be made to those sections of the Education (Scotland) Act, 1908, which deal with defective children (Section 5) and neglected children (Section 6).

NEGLECTED CHILDREN.—When as the result of medical inspection or otherwise it is brought to the notice of the School Board that a child attending a school within their district is in a filthy or verminous state, or is unable by reason of lack of food or of clothing to take full advantage of the education provided, it shall be the duty of the School Board, after due warning, to summon the parents.

The conditions specified are not defined by Statute, but when the legal procedure provided for dealing with such children has been carefully considered it will be found that they refer to conditions of gross neglect, liable to be punished under the Prevention of Cruelty to Children clause of the Children Act, 1908. If reference be made to that Act it will be found that the punishment provided includes imprisonment, or a heavy fine.

The records of inspection show that a large number of children have been found with nits, and some even with lice on their head, and a smaller number with even lice on the body; but it must not for one moment be supposed that such conditions can be described as filthy or verminous in the sense of Section 6 of the Education (Scotland) Act, above quoted. A number of the homes where the children were reported to have had lice on the head were visited by sanitary officers or health visitors, and found to be in most instances scrupulously clean. The children were regularly bathed, but great difficulty was being experienced in keeping the head free from lice, due no doubt to the frequency with which infection and re-infection take place at school. The condition of the hair and the head in such cases has been described as pediculous, as the word verminous should be reserved for cases that come under Section 6. The presence of nits or lice on the head is no doubt worthy of serious attention by the parents, and every effort should be made to arouse attention, and control the spread of the parasite; but it should be remembered that many mothers have been taught to think well of the louse, deeming its presence a sign of good health. Our object will be to get parents to see the louse as we do—as a source of annoyance and trouble, not only to the persons affected but to others with whom they come in contact. Thus may the louse become " detested, shunn'd by saunt an' sinner."

When a lousy condition is associated with filthiness of the body or clothing, or, in other words, when the condition of the child is verminous, the procedure adopted is first to notify the parents by a serious warning, and at the same time the health authorities, with a view to a visit being made to the home by a health visitor or sanitary officer. If remedial measures by this means fail, a special report will be made to the School Board with a view to proceedings being taken under Section 6. Only one such case was dealt with during the year. The report thereon by the health visitor, Nurse . . . states—

" I have called on Mrs. . . . to-day, and must admit it is one of the worst houses I have been in. It is an old house. A room and kitchen, in a most filthy condition, especially the beds. There seemed to be no blankets; in fact, very little bedding of any kind. I saw the boy you mention. He is about twelve years old. The mother admits that he had been going without underclothing, shoes, or stockings from the 10th until 14th February. She had got him a shirt at a second-hand shop, which she paid tenpence for, stockings fourpence, and boots ninepence. The clothing on the boy was very verminous and dirty. Mrs. . . . also stated that her husband had been idle for six months, and that she could not help being in this condition. He has been working for the past few months, however, and is earning 19s. 8d. per week. There are also working—

A son, aged 22 years, earning 17s. 6d. per week.
Daughter, aged 17 years, earning 5s. 6d. per week.
" " 15 " " 5s. per week.

The other members of the family are :—John, twelve years (boy referred to); Mary, ten years; Thomas, six years; Margaret, four years; Baby, two years. Margaret and Baby are both very dirty and scantily clad. I have advised the mother what to do, and will supply her with soap and disinfectant."

The cleansing of persons affected with body vermin is often surrounded with considerable difficulty. The subject has engaged the attention of local authorities for many years. In 1897 an Act * to permit local authorities to provide cleansing appliances for persons infested with vermin came into operation, empowering them at their discretion to provide facilities for anyone who should apply on the ground that he is infested with vermin to have the use free of charge of any apparatus which the authority possess for cleansing the person from vermin.

The Children Act, 1908, Section 122, provides that a local education authority may direct their medical officer to examine in any public elementary school, the person or clothing of any child attending the school, and if on examination the medical officer . . . is of opinion that the person or clothing is infected with vermin, or is in a foul and filthy condition, the education authority may require the parent to cleanse the person or clothing of the child within twenty-four hours after the receipt of the notice. Failing compliance with the notice, the medical officer may remove the child from school, and may cause the person and clothing of the child to be properly cleansed in suitable premises, and may detain the child there until the cleansing is effected. The sanitary authority are called upon to allow the education authority to use such appliances and apparatus for the purpose upon such payment as may be agreed between them and the education authority. After cleansing by the education authority should the parent allow the child to get into a verminous condition again, the parent becomes liable to a fine not exceeding ten shillings.

The obligation to carry out this cleansing process is laid upon the education authority; but there can be no doubt that the work can be more efficiently and successfully carried out by the sanitary authority. When a child attending school becomes seriously affected with body vermin, and cleansing cannot be secured at home, it will generally be found that other members of the household are affected. There is, therefore, great probability of re-infection after cleansing the child attending school by the means suggested. It is to be earnestly hoped that the work of medical examination and supervision of school children can be carried on without reference to Acts of Parliament, as so much of preventive medicine has been carried on by the Public Health service. It cannot be too strongly emphasised that a large part of the work done for the prevention and control of infectious and contagious disease is governed not by Statute law, but by public opinion and common consent. Indeed, it may be safely asserted that reformation in social and domestic habits is seldom attained by Acts of Parliament, except in so far as they give expression to well formed and carefully applied public opinion.

Lack of food or clothing are conditions usually associated with a filthy or verminous state; and it should be carefully noted that the

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* The Cleansing of Persons Act.

lack of food or of clothing must be of such a degree that the pupil is unable by reason of that to take full advantage of the education provided. The latter part of Section 6 provides a remedy by the School Board—when they are satisfied that the condition arises through poverty or ill-health of the parents, then they are authorised to make such provision for the child as they deem necessary while the child is under obligation to attend school. I understand that at least one School Board is making provision for such cases already brought under their notice.

DEFECTIVE CHILDREN.—Special provision for the education of the physically or mentally defective children as provided for in the Education of Defective Children (Scotland) Act, 1906, has been steadily kept in view by the medical inspectors. Section 2 of that Act defines mentally defective children as follows:—

> "The expression 'epileptic children' means children who, not being idiots or imbeciles, are unfit, by reason of severe epilepsy, to attend the ordinary schools.
>
> "The expression 'defective children' means children who, not being imbecile, and not being merely dull or backward, are, by reason of mental or physical defect, incapable of receiving proper benefit from the instruction in the ordinary schools."

Four groups of children are here referred to—the dull or backward children who benefit from the instruction in an ordinary school; the mentally defective requiring instruction in special schools; epileptics, also requiring instruction in special schools; imbeciles or idiots fit for an asylum. Special reports are at once made by the medical inspectors and forwarded to the School Boards where pupils are found to come within the definition of "mentally defective" as given by Statute.

In the pages which follow the results of inspection and remedial measures are discussed by the senior inspectors under the different headings contained in the schedule.

In the foregoing portion of this report, as well as in the portion which follows, much has been inserted in consideration of the fact that this was a first report, and in future issues will not be repeated, but any suggestions that can be made with a view to improving future reports will be gladly welcomed.

Clothing and Foot Gear.—In estimating the sufficiency of clothing and foot gear of the children considerable difficulty was experienced. There were certain essential factors to be considered before a judgment could be given, and of these the chief were :—(1) The time of the year at which the examination was made; obviously what would be sufficient in the summer months would be quite inadequate in winter. (2) Some children were evidently specially dressed for the medical inspector's visit. (3) Variation in physique; many children of the hardy type can be quite comfortable in clothing which in the case of a less physically robust child would be insufficient. However, with these elements of possible error kept in view, a decision was arrived at with the following results :—Insufficient clothing was recorded in 623 of the infant pupils out of 10,909 examined, or 5·7 per cent.; in 322 of the senior pupils out of 8,752 examined, or 3·6 per cent. That is of the total routine cases a percentage of 4·7. In addition to these routine cases, 301 children were specially presented on account of being insufficiently clothed. In all groups it was found that the boys were the chief sufferers, the ratio being more than 2 to 1. A notice calling the attention of the parent or guardian to the fact that the child was insufficiently clothed and calling for remedy was sent to 303 parents. In several instances special notices were sent not for unsatisfactory clothing, but for clothing in a filthy state, and a number were reported to the Medical Officer of Health. In some cases, but these were few in number, the children were over-clothed, so that they were burdened, and in some cases perspiring from the weight of the clothing.

Nutrition. — The number of pupils recorded as under-nourished was 903, or 3·8 per cent. of the three groups, mostly found in the selected and the infant groups, but only in 102 cases was the under-nourishment considered of such a nature as to require the attention of parents. In the majority of these cases this condition was merely another factor in the general neglect of the child, as it was found that verminous conditions, insufficient clothing, and malnutrition went hand in hand. In these cases, when questions regarding the child's diet were asked, it was found that bread and jam and tea constituted the principal fare. In few, if any, cases was porridge and milk partaken of, and rarely was soup or broth provided. No regular mid-day meal was given, but the children were sent out to school with a piece of bread and jam. Although, when questioned, few children owned to being hungry, the fact that hunger was absent is far from proving that sufficient nourishment was being provided.

The habit of allowing children to sit up late, or to run about the streets until a late hour, is also largely responsible for the puny, anæmic, and ill-nourished condition of these children. Parents do not fully recognise the great benefits that their children derive from good, healthful sleep, and instead of a child of from five to eight years obtaining at least ten hours of sleep nightly, it was found that in the majority of cases eight hours were considered amply sufficient. With reference to the providing of a suitable meal in the middle of the day, many of the schools throughout the County have been doing this for some years past, while many others are contemplating making a start in the near future. In those schools where such provision is made, a bowl of broth or soup with a piece of bread is provided for those children who wish it. In some cases a small charge of one halfpenny is made, but in others the meal is provided gratis. Those teachers who have undertaken the administration of this very important branch of school work deserve every commendation for their generous help.

Lice and Nits.—For convenience two groups of conditions under this heading have been recorded—nits on the hair, and lice on head or body.

NITS ON THE HAIR.—On considering the numbers returned as suffering from this condition, it is very evident that of the pupils affected the great majority are girls. Thus, amongst the infant children, whilst only 103 boys, or 1·9 per cent., were affected with nits on the hair, no fewer than 1,168 girls, or 21·9 per cent., were affected; and in the senior division, whilst only 28 boys, or 0·6 per cent., had nits on the hair, 666 girls, or 15·8 per cent., were suffering from this condition. The presence of a few nits in the child's hair was not recorded—otherwise the numbers of affected children would have been very much larger. Amongst the girls the nits varied in number from a few dozens up to thousands, many of the cases appearing as if the hair had been "peppered" white. This enormously greater incidence of nits amongst girls would, of course, be obviated were the hair kept short till girls reached the age of twelve years, when they could reasonably be expected to take care of it themselves. In the case of senior pupils, that is those of thirteen years and upwards, there is little excuse for girls or boys having nits in their hair, and the fact that such are present is merely an indication of carelessness on the part of the pupil. The removal of nits from the hair is a tedious process; but the fact remains that they can be removed with the exercise of care and patience, so parents and pupils should see to it that after removal no re-infection occurs. In cases where the hair is matted with nits and dirt, there is no remedy but the cutting of the hair short. There is no easy, convenient method yet in vogue for the removal of nits, but if the instructions on the card issued to the parents are followed the nits will ultimately be got rid of.

In notifying parents regarding the presence of nits in their children's heads, only the worst cases were selected, due consideration being given in every case to obvious cleanliness of the scalp and to endeavour being made at home to keep the hair free from lice and nits. In all, **833** notices were sent to parents calling upon them to remedy the condition.

Lice on Head and Body.—This condition was not found nearly so frequently as was the condition of nits. The disparity, however, is more apparent than real, for in many cases the children's heads and bodies had been specially cleaned for the medical inspection; and although no actual lice were to be seen, still the evidences of their recent presence could not be removed so easily. It was a common occurrence to find a child with no actual lice on the head or body, but whose hair was covered with nits, and whose neck, shoulders, arms, and breast were covered with innumerable vermin bites, while lying in the seams of the under garments—especially in the region of the neckband, shoulders, and armpits—were countless nits of the body louse. The irritation caused by vermin on the head or on the body must have a very detrimental effect on the child's health; and the almost constant inclination to scratch is not conducive to the giving of attention to the teacher's instruction. Moreover, there is no doubt that in many cases the enlarged glands found in a child's neck were due entirely to the broken out condition of the scalp arising from vermin, and that many of the impetiginous sores had a similar origin.

In every instance where lice were found a notice was immediately sent to the parents, calling upon them to have the child thoroughly cleaned and freed from all vermin before sending it back to school. In all, **768** such notices were sent.

This subject cannot be left without a very strong condemnation being made of those parents who, by their utter indifference to the cleanliness of their own children and their entire disregard for the children of other parents, are causing the schools to be looked upon as sources of uncleanliness and infection.

Contagious Skin Diseases.—Impetigo. — This term is applied to skin eruptions which tend to spread from one part to another and form scabs. It is somewhat common among infants, and it is seen on exposed parts, such as the face and hands. Although not usually of a serious nature, the disease requires proper treatment. The greater prevalence among young children is probably due to the greater tendency to scratch.

Amongst the routine cases, 66 boys and 52 girls were found to be suffering in some degree from impetigo, and amongst the selected cases 43 children were similarly affected. Out of the 161 cases recorded, it was found necessary to notify **152** parents regarding the necessity for treatment. The worst cases were excluded from school for a short time.

The disease varied in severity from a small patch to large areas over the whole body. The principal sites were the angles of the mouth and chin, but in addition to these the scalp was frequently affected, owing to the scratching arising from an unclean condition. As this is a disease that can be easily cured in a few days if proper treatment is undertaken, there is no excuse for parents allowing their children to suffer from the affection for weeks and months as is often the case. There is no necessity for a child who is suffering from a mild degree of impetigo to remain off school, provided the crusts are removed and suitable ointment applied. In cases of greater severity it is certainly advisable that children be excluded from school for a few days till the acute symptoms have subsided.

Ringworm.—This disease is always due to a parasitic fungus, of which there are several species. The conditions produced are of varying severity, but they are herein classified in two groups—(1) ringworm of the head, and (2) ringworm of the body. The curing of cases in the latter group is a moderately easy matter, but ringworm of the scalp is by no means so amenable to treatment. Cases of this condition were found which had been going on for many months with slowly increasing severity. Moreover, parents and teachers are not able to recognise ringworm of the scalp in its early stages, so that the condition is allowed to proceed often for months before any steps are taken. The characteristic red circle of ringworm of body is easily recognisable, and treatment in most cases undertaken; but over and over again, what has been presumed to be merely a "scurfy" head, has been found when medically examined to be an undoubted case of ringworm.

Owing to the protracted nature of this disease and to the prolonged course of treatment necessary to eradicate it, a very serious problem arises regarding the schooling of a child. It is manifestly impossible that a child actively suffering from this condition should be allowed to attend an ordinary school; but once treatment has been in operation for some time, there is no reason why he should not attend school, provided a suitable linen cap is constantly worn.

Infant children were the principal sufferers from this disease, 19 boys and 8 girls being affected, whilst in the senior group only 3 boys were found. In addition to these, 20 cases were found in the selected group. Notices were sent to the parents in every case where ringworm was discovered, and one or two cases were treated in a rate-supported hospital.

No case of Favus was found.

Scabies.—This condition was not a common one, and when found it usually affected two or more members of the same family. In every case the disease was associated with other evidence of carelessness or neglect at home. In many cases, especially where the disease had been of fairly long standing, impetiginous sores were also present. Amongst the routine cases, 5 boys and 9 girls were found to be suffering from scabies. In addition to these, 11 children were found in the selected group to be also suffering from "itch." In every case a notice was sent to the parent, and the affected children excluded from school. Many cases were treated in a rate supported hospital.

Teeth.—The cases were few in number where a perfect set of teeth was found, and even amongst these there was little evidence of the regular use of the tooth brush. The records show that there were 4,401 children whose teeth were not considered satisfactory, and that there was little difference in the incidence between boys and girls. Add to this numbr 511 selected cases whose teeth were in a similar condition.

The amount of carelessness shown by parents in the matter of their children's teeth is very great. This carelessness is not confined to one section of the community only, but among all classes of children the same neglect was apparent. Children who were otherwise well cared for, clean, and well clad, exhibited a condition of the teeth that was far from satisfactory. The idea seems to prevail that in young children the temporary or milk teeth require no care; but this is by no means the case. Badly decayed temporary teeth demand treatment just as urgently as do the permanent, otherwise permanent teeth will come into surroundings which are far from healthy. In many cases ulceration of the gums and enlarged glands of the neck resulted from the neglected state of the temporary teeth. What is true of the temporary teeth is no less true of the permanent, and in the latter applies with greater force. In a large number of cases the origin of discharging glands in the neck was to be traced to the presence of decayed teeth; and the anæmic condition of many of the pupils was the result of septic absorption from suppurating roots. It cannot be expected that a child's nutrition can be good if the mastication of the food is imperfect, on the account of the presence of many decayed, useless teeth. In the issuing of special notices to parents regarding the state of their children's teeth certain factors were taken into consideration, such as the number of teeth involved, whether temporary or permanent, the condition of the gums and alveoli, the presence of glandular enlargement, the general condition of the child, &c. Special notice was sent to parents in all cases where eight or more teeth were found to be decayed; but when there was a septic condition of the mouth or gums, or where the child's health was likely to be prejudiced by the presence of decayed teeth, mere numbers were disregarded.

Special notices were sent to 584 parents, these notices referring chiefly to the permanent teeth. The question of remedy is a pressing one, and there is little likelihood of much improvement in the condition of affairs until systematic supervision of the teeth is instituted.

Nose and Throat.—TONSILS.—The number of pupils recorded as having enlarged tonsils was:—Infants—boys, 1,150, or 20·6 per cent.; girls, 1,144, or 21·5 per cent. Seniors—boys, 860, or 18·9 per cent.; girls, 816, or 19·4 per cent. In addition, 527 cases were recorded among the selected children as suffering from tonsillar enlargement. Special notices were sent to parents in 797 cases.

Enlarged tonsils were the commonest affection found in conditions affecting the nose and throat. Often only the right or left tonsil was found enlarged, but in the great majority of cases both were involved. Minor degrees of enlargement were disregarded, and only those cases were dealt with where such conditions as recurrent sore throat, intermittent or slight permanent deafness, defective articulation, &c., interfered with the physical or mental progress of the child. The degree of enlargement is no criterion of the harmful effects produced, as tonsillar deafness was found in many cases where only a moderate degree of enlargement existed, while in other cases where the tonsils were enormously enlarged no specially bad effect could be traced. Tonsils, when once greatly enlarged, rarely contract to their normal size, and in cases where there is marked permanent enlargement excision should be resorted to; otherwise, such tonsils are a constant menace to the health of the child.

ADENOIDS.—The number of pupils recorded as suffering from presence of adenoids was:—Infants—boys, 183, or 3·3 per cent.; girls, 136, or 2·5 per cent. Seniors—boys, 71, or 1·5 per cent.; girls, 55, or 1·3 per cent. In addition, 171 were recorded among the selected children as suffering from adenoids. Special notices were sent to parents in 133 cases.

Adenoids are excessive growths or "vegetations" arising from the lymphoid tissue in the naso-pharyngeal space, *i.e.*, the space between the nose and throat. When these vegetations are excessive a partial occlusion of the space occurs, so that the individual so affected finds great difficulty in breathing through the nose. The result is that mouth-breathing is resorted to. Adenoids are usually found in conjunction with enlarged tonsils, and are responsible for the great majority of cases of mouth breathing. Although no special examination was made to ascertain the actual degree of obstruction due to adenoids, yet the presence of such could be inferred from the narrow palate of the child, the converging or overlapping of the incisor teeth, the constant mouth-breathing, the history of snoring during sleep, the receding chin, and the dull "adenoid" appearance of the child. The only remedy is removal of the cause of the obstruction and subsequent training of the child to breathe through the nose, to prevent a recurrence of the growths. The small percentage of cases notified is due to the fact that only the worst cases and those where the presence of adenoids was markedly obvious were recorded. A digital examination of the naso-pharynx, although of great service in the diagnosing of the condition, entails considerable discomfort to the child, and was not resorted to, otherwise the number of cases found would probably have been much greater. Other conditions causing obstruction, such as nasal polypi, deviation of the nasal septum, and enlarged turbinal bones, &c., were found in some cases, but these were exceedingly few in number compared with the obstruction caused through enlarged tonsils and adenoid growths.

GLANDS.—The number of pupils recorded as having enlarged glands was:—Infants—boys, 989, or 17·7 per cent.; girls, 913, or 17·1 per cent. Seniors—boys, 553, or 12·1 per cent.; girls, 411, or 9·8 per cent. In addition, 396 cases were recorded among the selected children.

The glands affected were in the great majority of cases the submaxillary glands, and the degree of enlargement varied from the size of a hazel nut to that of a hen's egg. Often only one gland was found to be enlarged, but more frequently both were affected. Occasionally the submaxillary glands took part in a more extensive glandular enlargement, which involved the submental, parotid, and cervical glands. In many cases the cause of the enlargement was obscure, but there is little doubt that malnutrition plays an important part, especially in the case of the younger children. Septic conditions of the mouth, and enlarged and inflamed tonsils were also probable causes, but by far the commonest cause was carious teeth. The number of young children suffering from enlarged glands arising from bad teeth should be a sufficient answer to those who advocate that attention should only be given to the permanent teeth. Amongst the older children, in addition to those causes above mentioned might be added the practice of carrying heavy message baskets or parcels on their heads. This undue strain undoubtedly accounts for some cases of glandular enlargement, especially of the cervical glands.

In the case of the enlarged submaxillary and cervical glands, although most of them were quiescent, many of them were showing a tendency to break down, and several cases were found where they were actively discharging. In many cases—especially in those which were discharging—the discharge was of a tuberculous nature. When one considers that this could probably have been obviated by paying timely attention to the state of the teeth, it affords a very strong indictment against those parents who are indifferent to the condition of their children's teeth or mouth. Neglect in many cases also was another factor, and several cases of enlarged glands were due to neglected sores, to lack of proper nourishment, and to the fact that the home life of the child was by no means hygienic. As the tendency of these enlarged glands is for them to become tuberculous, this itself should afford a strong incentive to effectively deal with all those known causes of glandular enlargement.

It will be seen from the above figures that the younger children are more frequently affected than the older ones, but on the other hand many of the older pupils show scars on their neck indicative of gland removal. Only the worst cases were dealt with—those actually discharging or those which were showing a tendency to break down. In those cases where carious teeth, malnutrition, or neglected sores were considered to be the prime cause of the glandular enlargement, notices were sent calling for these conditions to be remedied, in the hope that the glandular enlargement would subside on the cause being removed.

Eyes.—External Eye Disease.—The number of pupils recorded as suffering from external eye disease was:—Infants—boys, 232, or 4·2 per cent.; girls, 242, or 4·5 per cent.; seniors—boys, 113, or 2·5 per cent.; girls, 120, or 2·8 per cent.; and among the selected cases 300 were suffering from some similar affection. Inflammation of the eyelids *(blepharitis marginalis)*, either of the mild, acute, or chronic variety, was the most frequent type of external eye disease met with. In many cases the children had had no treatment, and it was a common experience to find affected children coming to school with their eyelids encrusted with hardened discharge. Conjunctivitis was also found in several cases, ranging from a mild type up to an acute purulent form, or to the phlyctenular variety. When the condition was acute, or likely to become so, the child was excluded from school till recovery was established. No case of trachoma was found amongst any of the pupils. Amongst other external eye conditions found were:—Corneal opacities, interstitial keratitis, ectropion, stillicidium (due to blockage of the tear duct), styes, and acute inflammation of the lachrymal sac.

Vision.—The number of pupils considered to be suffering from some defect of vision was:—Seniors—boys, 739, or 16·2 per cent.; girls, 838, or 20 per cent. In addition, 1,160 of the selected children and 78 of the specially selected infants were also considered to be similarly affected. Notices were sent in all cases where defect of vision was considered to be present. With reference to the vision of the children, this was not at all satisfactory. Certainly the children of our larger towns were the chief sufferers; but there was scarcely a school, however favourably situated in a country district, which did not furnish its case of defective vision. The defect, when present, was commonly in both eyes, although there were also many cases where only one eye was defective. The method of testing the vision was by means of Snellen's test types, this being the method recommended in the Memorandum issued by the Education Department. The card is fixed at a distance of twenty feet from the pupil, and each eye tested separately. In cases where the light was not so good as it might have been, allowance was always made. Ability to read the 6/6 or 6/9 (Snellen) types was considered to be normal vision amongst the senior pupils, while 6/12 and upwards was deemed to be defective. The vision of infant pupils was not tested except in the case of a few who were specially selected by their teachers as being short sighted.

Where one or both eyes were considered defective when tested by Snellen's types, a notice was sent to the parents or guardian calling attention to the probable existence of eye defect in the child. There is no doubt that in some cases, on an ophthalmoscopic examination being made, no serious error of refraction would be discovered; but when one or both eyes show marked defective distance vision, there is good ground for assuming that treatment is necessary.

Different authorities give different statistics regarding the numbers of children who, being found defective by means of the test types, are subsequently found to be suffering from an error of refraction or from astigmatism when examined ophthalmoscopically. Some say 80 per cent. of those children are found to require treatment, while others put the percentage at a lower figure. Many of the children were already wearing glasses, but these having been obtained years previously, were often found to be unsuited to the present needs of the child. In other cases where unsuitable spectacles were being worn, it was ascertained that the child had obtained them from an optician without any scientific examination of the eye having been made. This practice of promiscuous buying of spectacles is strongly deprecated.

SQUINT.—The number of pupils affected with squint was:—Infants—boys, 105, or 1·8 per cent.; girls, 101, or 1·9 per cent.; seniors—boys, 56, or 1·2 per cent.; girls, 49, or 1·1 per cent.; and 173 selected cases.

The condition known as squint was also responsible for many of the cases of defective vision. When both eyes were affected, the commonest variety was the convergent squint. In the majority of cases, however, only one eye was affected; and here again internal squint was the commonest form met with. This is a condition that is much neglected by parents; and apart altogether from the disfigurement it causes, the danger of the affected eye becoming totally blind from disuse is great. Squint should in all cases be seen to as early as possible after it develops, and steps taken at once to have the condition remedied. Later on treatment is often of no avail.

Ears.—INFLAMMATION.—The number of pupils recorded as suffering from this disease was:—Infants—boys, 115, or 2 per cent.; girls, 75, or 1·4 per cent. Seniors—boys, 82, or 1·8 per cent.; girls, 71, or 1·7 per cent. In addition, 142 were recorded among the selected children. Notices were sent to parents in **370** cases.

The condition commonly observed was that of discharging ears—inflammation *(otitis media)*. In some cases this discharge was of a catarrhal, but in the majority it was of a purulent nature. The great majority of the cases dated from an attack of measles, scarlet fever, &c., and were of a more or less chronic nature. In the case of the senior pupils it was ascertained that the discharge was often intermittent, but in the younger children the history obtained pointed to a continuous discharge, dating usually from some acute illness. In some cases treatment had been undertaken, but owing to the prolonged nature of the discharge treatment had often been abandoned after a few weeks. In many cases no treatment had been undertaken at all. The catarrhal discharge, although a menace to the child's hearing, did not call for such urgent treatment as did the purulent, for in this latter case, besides the extra danger to the child, there was usually a very foul odour arising from it that was extremely disagreeable to the teacher and pupils of the class. The neglect to properly cleanse the discharge led in many cases to an eczematous condition being set up on the surface of the external ear. Some parents are extremely careless about a child's ear discharging, and do not appear to be cognisant of the danger that their child runs from such an affection. In one case that came under observation acute mastoid disease had suddenly developed after a prolonged period of discharge, and the child was sent off to hospital for immediate operation. Notices were sent to parents in all cases when treatment was not being undertaken. The fact that 370 such notices were sent out of a total of 485 cases of discharge, goes far to prove that parents are not at all fully alive to the necessity for treatment.

WAX.—The number of pupils recorded as having wax in their ears was :—Infants—boys, 302, or 5·4 per cent. ; girls, 280, or 5·2 per cent. Seniors—boys, 348, or 7·6 per cent. ; girls, 300, or 7·1 per cent. In addition, 189 cases were found among the selected children. Special notices were sent to parents in 393 instances.

Wax in one or both ears was a common condition found amongst boys and girls of all ages. In some cases this interfered with the child's hearing, while in others, although large plugs were present, the hearing was not affected. The cause of these concretions is due not only to excessive ceruminous secretion, but to the habit of not drying the ears thoroughly and removing the soapy lather after washing. The consequence is that a sticky matrix is formed, on which are embedded particles of dust, &c., and this, after successive deposits have accumulated, forms a hard plug. Amongst the infants the plug was chiefly of the soft variety, and could easily be removed by a gentle syringing with warm water, but amongst the seniors the concretion was often so hard that some process of softening (*e.g.*, with glycerine) would be necessary before the syringing would be effective. When the plugs were of the hard variety, or where there was an impairment, however slight, of the child's hearing, a notice was sent to the parents calling attention to the condition.

HEARING.—The number of pupils recorded with defective hearing was :—Seniors—boys, 133, or 2·9 per cent.; girls, 130, or 3 per cent. In addition, 224 were recorded among the selected children as suffering from defective hearing. Special notices were sent to parents in 256 cases.

The condition of hearing amongst the pupils was fairly satisfactory. The tests employed consisted (1) in the "watch" test, *i.e.*, the discerning, by each ear separately, the ticking of a watch held at a regular distance, and (2) in the "whisper" test. Of the two methods, the "whisper" test was found not only to be the quicker method of testing but also the more reliable. Amongst the infant classes the testing of the hearing was not generally undertaken, and only those children were so tested who, by reason of special dulness or of showing special inattentiveness in class, were thought to be possibly suffering from some defect in hearing. In all, 55 such cases were considered to be suffering from a greater or lesser degree of deafness. The chief causes of the deafness were long-continued ear discharge, and plugs of hard wax. Cases of intermittent deafness were found, arising from enlarged conditions of the tonsils, or catarrhal conditions of the Eustachian tube. No case was found where a child had been deaf from birth.

Speech.—The records of defective speech were :—Infants—boys, 51, or ·9 per cent.; girls, 29, or ·5 per cent. Seniors—boys, 68, or 1·5 per cent.; girls, 28, or ·7 per cent. Among selected children, 136.

"Stammering" was the commonest defect found in speech. The condition was much more frequently met with amongst boys than amongst girls, and this held true not only in the infant and senior classes, but also amongst the specially selected cases. This distressing condition is largely of nervous origin, no physical defect of palate, tongue, or throat having been found in any of the stammerers. In all cases where stammering was found, the teacher's attention was drawn to measures which might be adopted with a view to ameliorating or remedying the defect. In the case of the senior pupils simple rules for their guidance were given, which, if conscientiously followed out, would be of great help in correcting their speech. In cases where articulation was defective, or where enunciation was indistinct, it was found that carelessness was largely to blame; and here the home life of the child was probably the determining factor. In some other cases physical defect was found, enlarged tonsils causing "thickness" of speech, while the presence of harelip or cleft palate was, of course, a serious defect in the speech mechanism. In a few cases a "tongue-tied" condition was met with, and such cases were notified for operative treatment. The preponderance of boys affected in the matter of defective speech amongst the routine cases is shown from the foregoing figures.

Mental Condition. — MENTALLY DULL. — The number of pupils found to come under the category of dull and backward was:—Infants—boys, 72, or 1·3 per cent.; girls, 54, or 1·0 per cent. Seniors—boys, 25, or ·5 per cent.; girls, 23, or ·5 per cent. In addition, however, to these, 134 selected cases were considered to belong to the same class. No case of mental dulness *per se* was notified to the parents.

In arriving at an estimate of the mental condition of a child considerable difficulty was encountered. It is not an easy matter, on examining a child for the first time, to arrive at a definite conclusion as to whether a child is really intellectually dull or whether he is merely shy or reticent in the presence of a stranger, and especially is this the case when the child belongs to the infant class. In all cases where mental dullness was suspected, the help of the teacher was of great benefit in arriving at a definite conclusion. Many of the youngest children maintained an unbroken silence during the examination, and could not be induced to reply to the simplest of questions, but on the teacher being applied to the verdict was usually given that the child was bright, and answered readily enough in the class. In other cases, however, a degree of backwardness was shown out of all proportion to what is usually found in children of that age group. Many factors are at work in cases of mental dulness, and the influence of heredity, home conditions, and neglect, or the presence of physical defects such as enlarged tonsils, adenoids, defective eyesight, or impaired hearing, cannot be overlooked. However, in the absence of these external or physical contributory causes, when marked backwardness was exhibited the child was noted as being dull, and will be specially examined from time to time to ascertain what improvement, if any, is taking place.

MENTALLY DEFICIENT.—The number of pupils recorded as mentally deficient was:—Infants—boys, 9, or ·16 per cent.; girls, 9, or ·16 per cent. Seniors—boys, 7, or ·15 per cent.; girls, 5, or ·12 per cent. In addition, 42 cases were found amongst the selected children.

The difficulty experienced in deciding as to mental dulness in a child was considerably increased when it had to be determined whether a child was mentally defective or not. In this matter the evidence of the teacher was not so helpful, as it very frequently occurred that teachers presented supposed mentally deficient children for examination, who, when examined thoroughly, were found, in the majority of cases, to be merely dull or backward. Many teachers fail to fully recognise the wide gulf which separates the *sub*normal from the *ab*normal. The point to be determined in all these cases of supposed mental deficiency was whether the children in question were of such poor mental calibre as to be incapable of obtaining full benefit from the ordinary instruction given in an elementary school. In some cases no difficulty was experienced in arriving at a definite conclusion, some of the pupils showing well-marked signs and symptoms of mental defect, but in cases where there was doubt or uncertainty as to a sure diagnosis, the pupils were, in every case, given the benefit of the doubt, and were noted for future examination. In the great majority of cases which were noted as mentally defective, the type of defect belonged to the "Amentia" variety, *i.e.*, the children, so far as could be ascertained, had never exhibited normal intelligence, but had been consistently mentally obtuse during all their school life. The evidence of the parents also confirmed this as regards the earlier years of the child's life, and the usual report of the parents was that "the child had been late in walking, in speaking, or had been difficult to rear from childhood." The number recorded as being mentally deficient certainly does not give the total of such deficients in the area, as there are many defective children who are never sent to school although of school age, while even in the schools themselves there must be many children who, on thorough examination, will also come under the category. In two instances the children were idiots, occasionally exhibiting vicious tendencies, and it was considered advisable to exclude them from school meantime.

Several of the School Boards are now seriously considering the question of how to deal with the mentally deficient pupils in their area, and in order to obtain full information regarding the number and the type of such defective children, are requesting examination to be made of the supposed deficient cases. An examination for this purpose was made at the instance of one School Board, when, of 27 pupils presented for examination, 11 were found to be mentally defective. In another School Board area, of 3 pupils specially presented, two were found to come under the same catagory. It is expected that in the near future all the School Boards will be requesting a similar investigation made, to ascertain the necessity for the establishing of special classes or schools for the training and instruction of mentally deficient children.

Heart and Circulation.—The number of pupils recorded as suffering from some affection of the heart and circulation was:—Infants—boys, 21, or ·4 per cent.; girls, 9, or ·2 per cent. Seniors—boys, 40, or ·8 per cent.; girls, 32, or ·7 per cent. In addition, 20 cases were found amongst the selected children, where some disturbance of heart or circulation was present.

The condition of the heart and circulation of the pupils was considered to be very satisfactory, only 122 cases being recorded where some defect was found. The commonest defect was some slight functional derangement, due to the effects of a recent illness, to general malnutrition, or to anæmia, this latter specially applying to the senior girls. There were two girls suffering from Raynaud's disease (*i.e.*, a defective condition of the circulation in the extremities—hands, feet, &c.), one being of a rather severe nature. Where organic disease of the heart was found there was usually forthcoming a history either of rheumatism or chorea, and in all cases where such organic disease existed parents were notified regarding the condition, and teachers were instructed as to the necessity for exempting the affected pupils from physical drill.

Lungs. — The number of pupils recorded as suffering from an affection of the lungs was:—Infants—boys, 71, or 1·2 per cent.; girls, 66, or 1·2 per cent. Seniors—boys, 23, or ·5 per cent.; girls, 7, or ·1 per cent. In addition, 49 children were similarly affected amongst the selected group. Notices were sent to parents in 14 cases. By far the commonest condition found under this heading was bronchitis. In the great majority of cases the condition was of a very mild nature, and caused little or no inconvenience to the child, but in some few cases acute bronchitis was present. In all such cases the children were sent home forthwith, and an explanatory note sent to the parents. Pulmonary tuberculosis (consumption) is dealt with under a separate heading.

Nervous System.—Epilepsy.—The number of pupils recorded as suffering from epilepsy was:—Infants—boys, 3, or ·05 per cent.: girls, 1, or ·01 per cent. Seniors—boys, 7, or ·15 per cent.; girls, 3, or ·07 per cent. In addition, 12 cases were found amongst the selected children.

It is satisfactory to note that the number of cases of epilepsy found amongst the school children was very small. In many of the cases found the condition was of a mild nature *(petit mal)*, while in others the ailment was of a greater degree of severity. Some of the long-standing cases were found to be also mentally defective, and are included in that group. In almost every case the parents were fully alive to the gravity of the condition, and had already placed their children under medical supervision. Only in one instance had no treatment been carried out, and in this case the attention of the parents was urgently called to the necessity for placing the child under the care of their medical attendant. Owing to the chronic nature of the disease, parents often lose heart in the carrying out of the treatment prescribed, so that it is not surprising to find that such treatment is often of a spasmodic nature.

Chorea.—The cases of chorea found were very few in number—none of the infant children suffering from the affection, and only two amongst the senior pupils. In a few cases pupils were met with who had previously suffered from chorea, but in whom the ailment had ceased to be active. In some of these cases a slight heart affection had been left, and these are included under the heading of Heart and Circulation. In addition to the two cases mentioned above, there were 5 selected cases—4 girls and 1 boy. Only in one instance was it found necessary to notify the parents regarding the need for treatment.

INFANTILE PARALYSIS.—The number of pupils recorded as suffering from infantile paralysis was:—Infants—boys, 4, or ·07 per cent.; girls, 6, or ·11 per cent. Seniors—boys, 5, or ·1 per cent.; girls, 4, or ·09 per cent. In addition to these, 12 children amongst the selected cases were similarly affected.

The age at which children come to school is not one at which infantile paralysis in its acute form is usually found, so that its presence can be deduced chiefly from its manifestations. In cases where wasting or atrophy was still progressing the children were excluded from school. Such cases were, however, few in number. The great majority of cases recorded under the heading of Infantile Paralysis were those in which the disease had become arrested, but where, nevertheless, defects had been left behind in the form of atrophy of the limbs, or partial paralysis of one side of the body. Where such cases were discovered instructions were given to the teachers regarding suitable physical drill and exercises. In one case where it was suspected that the disease was still in an active condition notice was sent to the parents regarding the necessity for treatment.

Tuberculosis. — This disease is recorded under three headings, (*a*) pulmonary, (*b*) osseous, and (*c*) glandular. The most important of these, both as regards the patient and also as regards the community, is pulmonary tuberculosis *(phthisis pulmonalis)*, commonly known as " consumption."

PULMONARY.—The number of pupils recorded as suffering from pulmonary tuberculosis was:—Infants—boys, 4, or ·07 per cent.; girls, 1, or ·02 per cent. Seniors—boys, 2, or ·04 per cent. In addition, 8 cases were found in the selected children. It is very satisfactory to note that only 15 cases of pulmonary phthisis were found amongst the pupils examined, 10 of these being boys, and 5 being girls. In every case where this condition was present the pupil was excluded from school for a period of six months, at the expiry of which time another examination would be made to ascertain what improvement had taken place, and also whether it was advisable to re-admit the pupil to school. Several of these cases were treated in the County hospitals with benefit.

OSSEOUS.—The number of pupils recorded as suffering from osseous tuberculosis was:—Infants—boys, 16, or ·3 per cent.; girls, 15, or ·3 per cent. Seniors—boys, 7, or ·15 per cent.; girls, 7, or ·16 per cent. In addition, 30 cases were found amongst the selected children.

In this variety of tuberculosis the sites of the tubercular infection were various, the commonest of these being the hip-joint, the elbow-joint, and the bones of the hand and foot. In addition, cases were found where the ankle-joint, the shoulder-joint, and the bones of the spine were the seats of infection. In a great many cases the disease was quiescent, and did not require any special treatment further than strict attention to nourishment and to the general laws of health, but in other cases the condition was active, and demanded urgent attention. In these latter cases, when the condition was severe and the child's general health poor, exclusion from school was insisted upon until such time as the child could return without danger to his health. Hip-joint disease and disease of the spine (Pott's disease) were responsible for many of those cases included under the heading "deformities." In two cases, large psoas abscesses were found arising from the spine being involved with tuberculosis, and the parents were notified regarding the necessity for urgent treatment.

GLANDULAR.—The number of pupils recorded as suffering from glandular tuberculosis was:—Infants—boys, 36, or ·6 per cent.; girls, 45, or ·8 per cent. Seniors—boys, 26, or ·6 per cent.; girls, 18, or ·4 per cent. In addition, 54 cases were found amongst the selected children.

This variety of tuberculosis accounted for most of the tuberculous conditions found. The glands chiefly affected were the cervical glands. Sometimes only one set of glands was involved, but in many cases there was a much more extensive infection. Undoubtedly, in the case of tubercular disease of the cervical glands the channel of infection is to be looked for chiefly where there is decay of the teeth, and this should be another very strong plea for better supervision of the teeth and mouth. Notices were sent to parents in all cases where no treatment was being undertaken; and in several instances where the discharge from the glands was profuse the pupils were excluded from school until the discharge had either ceased or was sufficiently scanty to be inoffensive. In addition to these three groups of tubercular disease, 4 cases of hydrocephalus, 1 case of lupus vulgaris, and 1 case of tubercular peritonitis were found.

Rickets.—The number of pupils recorded as affected with rickets was:—Infants—boys, 85, or 1·52 per cent.; girls, 83, or 1·55 per cent. Seniors—boys, 25, or ·54 per cent.; girls, 9, or ·21 per cent. In addition, 61 cases of rickets were found among the selected children. In considering those children affected with rickets, it must be borne in mind that nearly all cases which came under observation were those in which rickets had been active previous to the pupils coming to school. The various deformities were already well pronounced, and far beyond the stage when preventive treatment would have been of any avail. In cases where it was considered that the disease was still active, parents were requested to undertake treatment with a view to arresting the progress of the disease. As rickets is a disease essentially of malnutrition and lack of hygienic surroundings at home, it is not surprising to find that the worst cases also showed signs of general neglect. The various manifestations of the disease included bow legs, "knock knees," anterior curvatures of the tibiæ, pigeon chest, &c. Almost invariably also amongst the worst cases of rickets it was found that the teeth were in an extremely decayed condition. As was to be expected, the incidence of the disease was much greater in the towns than in the country districts.

Deformities. — Under this heading are included such cases as hunchback, club-foot, atrophied limbs, bow legs, "knock knee," &c., but these have already been discussed under Tuberculosis, Nervous Disease, and Rickets. However, there were discovered many other deformities which are not included in the above groups, viz., bifid uvula, 28; deflected nasal septum, 5; amputated limbs, 7; cleft palate, 10; webbed fingers, 1; undescended testicle, 5; unreduced dislocation of ulna, 1; torticollis, 4; contracted nasal orifice, 4.

Infectious Disease.—The small number of cases of infectious disease found amongst the pupils was extremely gratifying.

Amongst the routines, 10 cases were found, made up as follows:—scarlet fever, 3; mumps, 2; and chickenpox, 5. One child in the selected group was found to be suffering from chickenpox. It is satisfactory to note that no case of diphtheria was found amongst the children. All cases of infectious disease were notified and excluded from school forthwith.

Other Diseases.—In addition to the above there was a large class of other diseases or defects, made up of the following conditions:—Anæmia, 174; seborrhœa, 58; eczema, 39; alopecia, 35; urticaria, 2; purpura, 1; enlarged thyroid gland, 22; nasal polypi, 9; hernia, 15; ozœna, 9; psoriasis, 6; congenital syphilis, 3; ichthyosis, 18; herpes, 1; acne, 4; dermoid cyst, 4; nephritis, 2; monilethrix, 1; and albinism, 5.

In the cases of anæmia recorded the great majority were girls in the senior groups, but considering the physiological changes which occur at this age this is not to be wondered at.

EXCLUSIONS.—The following tabular statement shows the number of scholars excluded from attendance at schools, the diseases or cause for which exclusion was considered necessary, and the Health Authorities notified of these conditions:—

HEALTH AUTHORITY.	SKIN CONDITIONS.			TUBERCULOSIS.		
	Ringworm.	Scabies.	Impetigo.	Pulmonary.	Glandular.	Other Forms.
COUNTY.						
Upper Ward, ...	3	—	—	—	3	—
Middle Ward, ...	10	9	9*	5	2	3
Lower Ward, ...	4	2	—	—	2	—
BURGHS.						
Airdrie, ...	2	—	2	2	1	1
Coatbridge, ...	3	1	8	—	—	—
Hamilton, ...	—	6	2	—	—	
Lanark, ...	—		—	—	2	—
Motherwell, ...	2		2*	2	1	
Maryhill (Glasgow),	6	—	—	2	—	—
Rutherglen, ...	3	—	—	—	—	—
Wishaw, ...	—	—	5	—	2	—

* Includes one case Eczema Capitis.

In addition to the above tabulated diseases the following were recognised:—Phlyctenular Conjunctivitis, 1; Chickenpox, 6; Scarlet Fever, 3; and Mumps, 2.

PART II.—PUBLIC HEALTH SERVICE.

CO-OPERATION AND CO-ORDINATION.

Co-operation between education and health authorities in the prevention and control of infectious disease has been practised to some extent for very many years. As time rolls on the scope or limits of co-operation become wider and wider.

In October, 1901, the two central authorities issued communications on the subject—the Local Government Board pointed out to health authorities the mutual advantages of co-operation with School Boards, not only in matters of infectious disease and school attendance, but also in the sanitary supervision of school premises and in dealing with children who present themselves at school in a state of uncleanliness so gross that they cannot be allowed to mingle with other children; the Scotch Education Department, in their circular letter to School Boards, pointed out the difficulties presented in forcing the attendance at school of neglected children, and suggested that much might be done by systemically reporting to the Local Authority cases to be dealt with by them under the Public Health Act.

The Education (Scotland) Act, 1908, emphasised in a practical way the need for further co-operation. In circular 421, issued by the Scotch Education Department, it is stated the school medical service should be in as close touch as possible with the Public Health Authorities. In the memorandum and regulations relative thereto the relation of the New Act to the existing health authorities is fully explained. Under the heading " Amelioration and Physical Improvement " the whole field of public health is traversed. The sub-headings include—

(1) General Sanitation and Cleansing of Schools.

(2) Cleansing of Children and Disinfection of Clothing.

(3) Infectious Diseases.

(4) Tuberculosis and Open-air Schools.

(5) Holiday Homes and Convalescent Homes for Children.

(6) Skin Diseases.

In discussing these subjects frequent reference is made to the Public Health Act, the Public Health Authority, and the Medical Officer of Health. " Every School Board ought to keep in intimate touch with the Public Health Authorities and their officers;" " the School Boards, by cordial co-operation with the Public Health Authorities and their medical officers can do," "the Local Authority for Public Health may provide, furnish, and maintain," "co-operation with the Public Health Authority will be of immense service here" are references to expressions that practical experience in the work of medical inspection has cordially endorsed if school medical inspection is to attain all the objects in view.

The number of health authorities concerned, apart from the Maryhill portion in the City of Glasgow, is eleven. Six of these are burghs, each with a population of about 25,000 and over; two are smaller burghs, and three are County sanitary districts. Each authority has a separate Public Health service for its own sanitary district. The area and population of each sanitary district and the name of the Medical Officer of Health is here tabulated:—

PUBLIC HEALTH MEDICAL STAFF.

Medical Officer of Health.	Sanitary Districts.	Area.	Population Estimated to Middle of 1908.
A. J. Wilson, F.R.C.S., D.P.H.,	Burgh of Airdrie, ...	1,049	25,000
John T. Wilson, M.D., D.P.H., ...	Do. Biggar, ...	62	1,400
R. Hamilton, M.B.C.M., D.P.H.,	Do. Coatbridge, ...	1,845	44,008
J. L. Loudon, M D., D.P.H., ...	Do. Hamilton, ...	1,332	40,023
A. M. Adams, F.R.C.S., D.P.H.,	Do. Lanark, ...	506	5,746
Robert P. Jack, M.B.C.M., D.P.H.,	Do. Motherwell, ...	1,324	38,090
	Do. Rutherglen, ...	808	22,859
Wm. Duff, M.B.C.M., ...	Do. Wishaw, ...	919	23,532
John T. Wilson, M.D., D.P.H., ... Asst. John F. Macdonald, M.D., D.P.H., ... Asst. John A. Watt, M.B Ch.B., D.P.H., ...	Lower Ward of County,	26,591	54,000
	Middle do. do.,	186,623	208,000
	Upper do. do.,	327,013	42,700
		548,072	505,358

The County Medical Officer, who acts for the three County sanitary districts and one small burgh, has to deal with a total population of over 300,000, while the officers of the seven large burghs, exclusive of the City of Glasgow, have a total population of over 200,000. It is therefore of great moment that burgh Medical Officers of Health and the respective burgh authorities should take an interest in the medical inspection of school children within their areas. In seeking to attain this end the medical inspectors have notified each Medical Officer of Health of any children discovered suffering from conditions which might be dealt with under the Public Health Act. These conditions include in the group of zymotic diseases, diphtheria, scarlet fever, measles, whooping-cough, mumps, and chickenpox; of contagious skin affections, ringworm and itch are the most important of these diseases prevalent.

Exclusions from school on account of these infectious or contagious conditions should be certified to the school authorities by the Medical Officer of Health, with a view to claims for loss of attendance being made under Article 19 F of the Code and remedial measures being obtained. Children presenting appearances suggesting want of cleanliness in the home should be similarly dealt with. Some account of the work that has been done in the County areas is here given, and an effort will be made before another year passes to make some arrangement with burgh health officers for an account of the work done in their areas.

CLEANLINESS.—Lists of children whose parents were notified on account of lice on the head were at first handed to a sanitary officer or health visitor, in order that some information might be judiciously obtained as to the conditions in the home. This information showed that about 90 per cent. resided in well kept homes, where the parents, being of cleanly habits, felt indignant at receiving a notice regarding the condition of their child's head. Some parents stated that, notwithstanding all their efforts (cleansing and the use of preparations, such as paraffin and oil), the child's head could not be got free of nits. It should, therefore, be clearly kept in mind that the conditions reported under this heading are not, in the majority of cases, associated with the want of cleanliness at home. Notices to health authorities were subsequently issued only in cases where the condition of the clothing and general appearance were very suggestive of neglected homes.

So widespread is the prevalence of lice, and so tenacious are the parasitic ova or nits, it must be frankly admitted that remedial measures are in some schools not easily attained. The health authorities have excellent bathing arrangements at their hospitals, and when a small ward can be set aside for cleansing purposes families badly infected with body lice could best be treated there. Steam disinfection of bedding and clothing is also of the utmost importance. There is, however, the greatest difficulty in persuading parents to accept of such assistance. The very suggestion of having to go to a public bathing and disinfecting station reflects upon the mother, and a visit from a sanitary inspector has been known to create serious disturbance in the home. Visitations are now made by the health visitor, who is a trained nurse.

SCABIES.—The nature and cause of this disease, commonly called itch, requires to be fully explained to the public, in whose mind a great deal of misapprehension on the subject seems to exist. Mothers have been known to become greatly upset when told that their children were suffering from itch. The name seems to suggest some dreadful disease associated with dirt and debauchery, whereas, as a matter of fact, the ailment may affect the most cleanly and exemplary people.

The parasitic insect* known as *Acarus Scabeii* burrows under the skin, causing an intense itching. The female parasite especially makes deep burrows, where she deposits eggs. So intense is the itching, especially at night, that the patient cannot refrain from scratching. This gives rise to sores. With proper arrangements for bathing the disease is easily cured, but as few workmen's houses have baths, with abundance of hot water, the medical attendant finds great difficulty in getting his prescribed treatment carried out, with the result that the disease usually spreads from one child to another, and sometimes a whole household becomes affected. Only 25 cases of this disease were discovered at school, but 52 were treated in hospitals of the County Local Authorities during the six months ending July, 1910, viz. :—

1 family of 6 children and the mother, .. = 7 Cases.
2 families of 6 children, ... = 12 ,,
3 do. 5 do., ... = 15 ,,
1 family of 4 do., ... = 4 ,,
1 do. 3 do., ... = 3 ,,
Families with one or two children, ... = 11 ,,
52 ,,

This shows to what an extent the disease spreads under treatment at home, and how many persons not attending school may be affected. Most of the cases were treated in wards specially set apart for this purpose at the Middle Ward Hospital, near Bellshill, and the treatment prescribed there by the Hospital Physician (Dr. Watt), as well as the results obtained, show how readily cases can be cured when suitable facilities are available. Most of the patients admitted were cases of long duration and badly affected with complications, mostly pustular infections. One family showed this in a very special degree, the children having a pustular excoriated condition of the buttocks and thighs. In simple cases, which were few, it was possible to effect a cure in about seven days, but the shortest period of treatment of the cases dealt with was 12 days, and the longest 43 days. For simple cases the treatment prescribed was—

(1) A cleansing bath on admission, when the skin was scrubbed with a suitable brush, using soft soap. This tended to open up the burrows in the skin, formed by the parasite.

(2) That same evening or next morning a sulphur bath, prepared from Liver of Sulphur *(Potassa Sulphurate)*. Three ounces of this material in about 30 gallons of water produces a strong-smelling sulphur bath, of which the temperature is kept about blood heat. The patient (sometimes two in one family) is immersed in this bath for 20 minutes, then placed in a blanket for twenty minutes, until the skin is dry. This simple medicated bath, repeated on three successive days, is generally sufficient to cure an uncomplicated case. In cases of long

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* Not a true insect, but a mite of the order *Arachnida*.

standing, complicated with scratching and sores, the sulphur bath treatment was combined with the use of Sulphur ointment, the prescription being that known as Wilkinson's formula. This ointment was applied twice daily to the parts of the body specially affected, and it aided in the destruction of the parasites, but was apt to give rise to irritation of the skin. For the cure of secondary lesions considerable time was sometimes required.

The disinfection of the patient's clothing was carried out, on at least three separate occasions, in the steam disinfector. First on admission, then about the middle of the period, and again about the day of discharge. Generally three or four baths on separate days was sufficient, but if the case did not improve rapidly and the secondary lesions did not heal, the baths were repeated. When secondary lesions were severe the inflammatory symptoms had to be subdued and bathing used cautiously.

Enquiries at the parents showed that they had done their best to cure their children, but had failed. Where several in a household were infected, the children were found to have slept together. The relief got by the patient from the intolerable itching was very striking, and they rapidly improved in bodily nutrition. The sulphur baths produced little irritation, whereas the ointment was very apt to do so.

Disinfection of the dwelling, and especially the bedding, was recommended, but in every case mothers begged to be allowed to carry out proper cleansing without fumigation. They seemed to feel as if some stigma or disgrace attached to their household. Inquiries made after the return home of the patients have shown that no re-infection took place, and the results obtained have been considered very satisfactory.

TINEA.—All cases of ringworm were notified to the County or Burgh health authorities, and were found in most instances to be under medical treatment. When the parasitic fungus infects the hairy scalp the disease may not be recognised until a considerable area has been involved. In such cases prolonged treatment under the best medical advice fails to effect a cure within a reasonable time, so that absence from school has to be enforced for periods varying from six to twelve months, or even longer. The suggestion was made that a skin ward should be opened in one of the infectious disease hospitals, so that serious cases, on the advice of their medical attendant, might be treated there. In this way four cases of ringworm of the hairy scalp *(Tinea Tonsurans)* and two cases affected on the face or neck *(Tinea Circinata)* were treated at the Middle Ward Hospital, near Bellshill. Two of these were under treatment for about six months, when one was discharged cured, but the other was a case of long duration, and, although discharged much improved, continued infected. As this case illustrates the difficulties from a medical and educational point of view, the notes of the hospital physician may be quoted :—

"G. B., aged 11, admitted 14th February, had a universal affection of the scalp, which had lasted for a period of five years. His hair was matted and crusted with inflammatory discharge of an impetiginous nature. He had been treated at several hospitals in Glasgow. The germicide selected for treatment was chrysarobin, made up in the form recommended by skin specialists, consisting of chrysarobin, wax, and lanolin. This is melted together and shaped into a rod, which is rubbed vigorously on to the diseased area twice a day. The head had been previously shaved, and at times an effort was made to remove the hair roots by epilation. As the chrysarobin produced smart reaction, an alternative treatment was used in the form of mercurial ointment.''

This boy was seen at the commencement of the present session, and his hairy scalp examined in the bacteriological laboratory, when it was found that the fungus could still be detected over almost the whole area of the hairy scalp, so that he remains absent from school with an exclusion certificate under the Public Health Act.

The other cases of ringworm do not call for any special comment.

The difficulties experienced in obtaining a cure for ringworm of the hairy scalp when the disease is extensive and of long standing is due to the fact that the parasitic fungus infests the roots of the hair where chemical germicides cannot be applied without seriously injuring the skin. Some years ago the influence of X rays was found to produce changes in the skin of an irritative nature, which when carefully controlled caused the hair to fall out without injuring the skin. During the past five years great advances have been made in devising means for controlling and measuring the effects of these rays, thus ensuring safety for both patient and operator. As a curative treatment for ringworm these electrical rays of light have been most efficacious. By this means the parasitic fungus is removed with the hair without causing pain. At present many hundred children have been successfully treated and cured of long standing ringworm within a period of three months. This electrical method of treating ringworm was brought under the notice of the Middle Ward District Committee, the Local Authority in whose district the greater number of cases have been discovered, and, after careful consideration, it was agreed to instal an X ray apparatus at the County Hospital near Motherwell, which is centrally situated for the whole area. After careful enquiry and seeing the treatment in operation at the London Hospital, it was thought desirable to secure the services for some time of a skin specialist experienced in this method of treatment. The installation is now being fitted up, so that treatment will be available shortly for any suitable cases recommended by medical practitioners.

Tuberculosis.—All forms of this disease—pulmonary, osseous, and glandular—have an interest for health authorities, but the preventive measures in operation vary in different sanitary districts. It was arranged to notify Health Officers of all cases of pulmonary phthisis or consumption, but of the other forms, only those cases with discharging surfaces. As showing the extent to which this disease affects school children, it may be of interest to quote the statistics available for the County district, where pulmonary phthisis is compulsorily notifiable, viz. :—

CASES NOTIFIED AND DEATHS REGISTERED FROM PULMONARY PHTHISIS AT AGES 5-15 YEARS AT 31ST OCTOBER.

DISTRICTS.	1909.		1910.		Cases. Surviving.
	Cases.	Deaths.	Cases.	Deaths.	
Upper Ward, - -	6	3	6	3	6
Middle ,, - -	78	18	59	9	110
Lower ,, - -	11	9	10	6	6
COUNTY, - - -	95	30	75	18	122

A large majority of these cases were afforded hospital treatment for at least three months. Many had been readmitted two or three —one even four—times, but as the disease was in many cases in an advanced stage no permanent improvement could be looked for. Some of these children, however, were suffering from only slight infections, with every prospect of a permanent cure, and questions will arise as to when they should resume school attendance after returning home.

School Boards are asked in the memorandum to consider how they can be helpful in preventing the development of the disease in children who show a susceptibility to consumption. Open-air schools are being advocated, and have been successfully carried on in various parts of England. The climate usually experienced in this County is in many districts both damp and cold, so that special arrangements for open-air work are necessary.

ZYMOTIC DISEASES.—The acute infectious diseases are for administrative purposes divided into two groups, those compulsorily notifiable by medical practitioners and householders including diphtheria, scarlet fever, and typhoid fever; those not compulsorily notifiable include measles, German measles, whooping-cough, mumps, and chickenpox. Co-operation on this important subject has been practised since public health administration began, and is the subject of legal enactments and administrative regulations. As a memorandum will shortly be issued to all School Boards throughout the County, with special reference to the exclusion of scholars and the closure of schools by the sanitary authority, further reference need not be made here.

In that portion of the memorandum issued by the Scotch Education Department relating to infectious diseases expectations are held out that may not be realised, especially with regard to diseases like scarlet fever. The words referred to read as follows:—"It is to be hoped that by systematic measures of inspection, personal cleansing, and the reporting of infectious cases the more serious diseases like measles and whooping-cough may be considerably limited in their sweep. Scarlet fever, which already receives a very large share of attention, ought in a short time to be reduced to a vanishing quantity among children at school. But these results and the consequent improvement in the grant-earning power of the schools cannot be achieved without strenuous and persistent medical supervision and cordial co-operation upon the lines indicated."

CLEANSING AND DISINFECTION OF SCHOOL PREMISES.—The memorandum issued in November, 1907, by the Scotch Education Department relating to the cleansing and disinfecting of schools is evidently being acted upon in many School Board areas, as may be instanced by the information taken from the records of the Sanitary Inspector for the Lower Ward. These records show that the floors are swept daily with damp sawdust, and washed at intervals varying from once a month to once in three months. School furniture—desks, seats, tables—are dusted daily, and washed at intervals varying from once a month to once in four months. Slates, where used, are in most schools cleaned daily, and disinfected at periods varying from once a week to once in four months. In some schools where jotters are in use these belong to the pupil, and are taken home, but in a number of schools note-books are used and afterwards burnt.

The walls and ceilings of all the principal rooms, class-rooms, and lobbies are brushed free from dust, and whitewashed or recoloured at intervals varying from once in six months to once in three years.

Special sanitary appliances — water-closets and urinals — are washed out at periods varying from once a day to once a week, and disinfection is carried out in some instances once a month, while in other instances once in three months.

The disinfection of premises in connection with outbreaks of infectious disease are always willingly carried out by sanitary authorities when desired, but some School Boards have even supplied the necessary appliances for carrying out this work, which is done by their own staff. In one School Board area, where free books are supplied to all pupils, the question of disinfection or destruction of books had to be very carefully considered.

SCHOOL BUILDINGS.—Plans of new buildings submitted to Local Authorities may not possess any special interest for this report, but detailed information can be supplied if desired. Existing school buildings have been inspected and reported upon by the sanitary officers. The school medical inspectors take very careful note of any serious conditions requiring attention, but only in two instances were reports submitted to School Boards calling attention to the unsatisfactory condition of the illumination provided by gas jets, and recommending incandescent burners.

County Bacteriological Laboratory.—From the school medical inspectors seventeen specimens were received as follows:—13 sputa from pupils suspected to be suffering from pulmonary phthisis, 2 swabs from throats suspicious of diphtheria, and 2 specimens from suspected ringworm cases.

Summary.—It is very difficult at this early stage of medical inspection to summarise the benefits resulting from the scheme, yet the six months' experience obtained has furnished data which shows—

(1) The introduction of medical inspection will be an incentive to most parents to keep their children clean and tidy.

(2) With the co-operation of local health authorities—Burgh and County—many children that are at present suffering from contagious or infectious disease, troublesome or dangerous to themselves and others, will not only be discovered, but satisfactorily treated without any undue loss of school attendance.

(3) School Boards will have the best medical advice in dealing with children who are either mentally or physically defective, and have a means of educating public opinion as to the necessity of making provision for such cases.

(4) Neglected children will be reported to School Boards, who can exercise their authority in dealing with the persons responsible.

(5) In securing remedial measures, it may be necessary for School Boards to consider whether assistance should be given in certain cases for defective vision and defective teeth.